

REMARKS

Office action summary

Claims 1-12, 15-26 and 28-42 are pending in the present application. No claims are presently added, amended, or canceled. The following rejections and allowances were made in the office action of April 13, 2010 ("Office Action"):

- Claims 29-31 were rejected under 35 USC § 103(a) as being unpatentable over Shah et al, US 2002/0131412 ("Shah"), in view of Hughes et al, US Patent 7,248,586 ("Hughes").
- Claim 32 was rejected under 35 USC § 103(a) as being unpatentable over Shah in view of Hughes, and further in view of Dove et al, US 2004/0246977 ("Dove").
- Claims 1-12, 15-26, 28 and 33-42 were allowed.

The rejections are discussed below. The examiner is respectfully urged to reconsider the application and withdraw the rejections. Should the examiner have any questions or concerns that might be efficiently resolved by way of a telephonic interview, the examiner is invited to call applicants' undersigned attorney, Jon M. Isaacson, at 206-332-1102.

Telephonic interview

On June 11, 2010, applicants' undersigned attorney and Examiner Sam conducted a telephonic interview. Applicants' undersigned attorney would like to thank the examiner for granting the interview. During the interview, applicants' arguments were discussed and the examiner agreed to reconsider the rejections following entry of applicants' formal response. Any further substance of the interview is incorporated into the remarks below.

Rejections under 35 USC § 103(a)

Claim 29 stands rejected under 35 USC § 103(a) as being unpatentable over Shah in view of Hughes. Claim 29 is generally directed to "[a]n input module" which comprises "a plurality of virtual output queues for accepting cells based on cell destination information" and "a plurality of virtual path queues for accepting head-of-line cells from the plurality of virtual

output queues.” Claim 29 further recites that “each of the virtual path queues accepts a head-of line cell from a virtual output queue based on a dynamic hashing scheme.”

The Office cites to Shah’s Fig. 1 as teaching a plurality of virtual output queues 110 and 112, and a plurality of virtual path queues 104 and 106. (Office Action, pages 2-3.) The Office recognizes that Shah fails to disclose that each of virtual path queues 104 and 106 “accepts a head-of line cell from a virtual output queue based on a dynamic hashing scheme,” as recited by claim 29. (*Id.*, page 3.) In an attempt to cure this deficiency in Shah, the Office cites to the packet recorder buffer 350 as a virtual path queue. (*Id.*, page 3.) The Office argues that Hughes’s packet recorder buffer 350 includes a head-of-line pointer 352 which accepts a head-of line cell based on a dynamic hashing scheme. (*Id.*, pages 3-4.) Applicants respectfully traverse the Office’s finding that Hughes’s packet recorder buffer 350 accepts a head-of line cell based on a dynamic hashing scheme.

Hughes describes that when system 300 receives a data packet 305, the data packet 305 is stored in packet receiving unit 320, and then passed to cache 330, to memory 340, and finally to packet reorder buffer 350. (Hughes, col. 7 lines 23-40.) While the data packet is being passed, processor 310 calculates a hash value for the data packet 305, and the hash value is stored with data packet 305 in packet record buffer 350. (*Id.*) Hughes describes that the “HOL [head-of-line] pointer 352 points to a packet that is stored for the longest period of time in packet reorder buffer 350” and that “HOL pointer 352 can be configured using any memory scheme.” (*Id.*, col. 7 lines 41-47.) Finally, Hughes describes once the route lookup process for data packet 305 is completed, the system 300 forwards the data packet 305 to packet forwarding unit 360 which outputs the data packet 305. (*Id.*, col. 7 lines 47-53.) Thus, Hughes teaches that data packets received and passed to the packet record buffer 350 and then forwarded from the packet record buffer 350 based on the configuration of an HOL pointer 352. While Hughes may teach that the forwarding of the data packet 305 from packet record buffer 350 is based on a calculated hash value, Hughes fails to teach or suggest that the packet record buffer 350 accepts data packet 305 based on the calculated hash value. Therefore, Hughes fails to teach or suggest “a plurality of virtual path queues” where “each of the virtual path queues accepts a head-of line cell from a virtual output queue based on a dynamic hashing scheme,” as recited by claim 29.

For at least the foregoing reasons, applicants submit that Shah and Hughes, individually and collectively, fail to teach or suggest “a plurality of virtual path queues” where “each of the virtual path queues accepts a head-of line cell from a virtual output queue based on a dynamic hashing scheme,” as recited by claim 29. Because of these deficiencies in the cited art, the Office Action fails to establish a *prima facie* case of obviousness of claim 29. Accordingly, applicants respectfully request withdrawal of the rejection of claim 29 under 35 USC § 103(a).

Claims 30-32 stand rejection under 35 USC § 103(a) and depend directly from claim 29. Inasmuch as claims 30-32 depend from an independent claim which patentably defines over the cited art, applicants respectfully submit that claims 30-32 patentably define over the cited art and that the Office Action fails to establish a *prima facie* case of obviousness of claims 30-32. Accordingly, applicants respectfully request withdrawal of the rejection of claims 30-32 under 35 USC § 103(a).

Allowed claims

Claims 1-12, 15-26, 28 and 33-42 were allowed. Applicants acknowledge the reasons for allowance set forth in the Office Action. Applicants agree that claims 1-12, 15-26, 28, and 33-42 are allowable for at least those reasons set forth in the Office Action. Applicants submit that there may additional reasons for the allowability of claims 1-12, 15-26, 28, and 33-42 that are not explicitly stated in the Office Action, and applicants do not waive any right to argue for the patentability of the claims by not further addressing those additional reasons here.

Conclusion

Applicants believe that the present remarks are responsive to each of the points raised by the examiner in the Office Action, and submit that claims 1-12, 15-26 and 28-42 of the application are in condition for allowance. Favorable consideration and passage to issue of the application at the examiner’s earliest convenience is earnestly solicited.

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